

Claims 1-2, 4-8 and 10-20 are pending in this application.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-2, 4-8, 10-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

(1) Claims 1-2, 4-8, 10-11 and 16-20 recite or read on 1-40% of hydrochloric acid, nitric acid, phosphorus acid, poly phosphoric acid and perchloric acid. There is insufficient written descriptive support for this subject matter. Although these acids were originally disclosed, 1-40% amount for these specific acids was not originally disclosed. The only instance of disclosure of a percentage range for the acids is found in specification page 6, lines 3 to the end of the page:

Art Unit: 1616

A preferred mixture would be 2-chlorophosphonic acid 10%-20% and Phosphoric Acid 1%-40%. This formulation would then be mixed with water as a carrier and applied to the foliage of the target plant at a rate of 3 gallons/Acre to 30 gallons/Acre. However, other acids will have a similar effect as seen in Table

1. Muratic Acid increased the efficacy of ethephon and the speed of the effect on cotton defoliation.

Table 1. Efficacy of ethephon applied with and with out the addition of muratic acid on the defoliation of cotton. Trial conducted in Bells TN Oct. 2003.

Target Code				Cotton		Cotton	
Part Rated				LEAF		LEAF	
Type				DEFOLIATION		DEFOLIATION	
Rating Unit				percent		percent	
Rating Date				Oct-13-03		Oct-18-03	
Trt-Eval Interval	Treatment Name	Rate	Rate Unit	3 DA-A		6 DA-A	
1	Untreated			0	b	0	c
2	ETHEPHON	16	FL OZ/A	10.8	b	19.6	bc
3	ETHEPHON	16	FL OZ/A	16.7	a	30	b
	MURATIC ACID	4	% V/V				
4	ETHEPHON	32	FL OZ/A	16.7	b	16.7	bc
5	ETHEPHON	32	FL OZ/A	30	a	46.7	a
	MURATIC ACID	4	% V/V				

It can be seen here that applicant only disclosed 1 to 40% for phosphoric acid.

Although "similar effect" is asserted for other acids, this is not the same thing as "same amount" or "similar amount." There is no disclosure of the same or similar percentage range for the other acids. Only one other acid is exemplified with a percentage, "MURATIC [sic] ACID" at 4 v/v%. Given that the formulation is "mixed with water" and

thus diluted, one skilled in the art would not have been able to determine the percentage actually used/applied even for muriatic acid.

To summarize, the original disclosure provides support only for 1 to 40% phosphoric acid. There is insufficient descriptive support for 1 to 40% of other acids. The amendment of 8/4/2008, which introduced 1 to 40% into the claims for the other acids, constitutes new matter, which does not find adequate descriptive support from the originally filed disclosure.

(2) Claims 1, 10-16 and 19 recite or read on directly applying to a cotton plant 1-40% acid + 10-20% phosphonic acid compound(s). However, the originally filed disclosure teaches mixing with water after obtaining the mixture of 1-40% phosphoric acid + 10-20% phosphonic acid compound(s) (see the copied portion of spec. p. 6 above). There must be a mixing with water explicitly recited for direct application; otherwise, insufficient written description must be found. The feature, "wherein said mixture is formulated as a liquid" is insufficient because the mixture of 1-40% acid + 10-20% phosphonic compound, without dilution with water, can be a liquid formulation.

(3) Claims 10 and 11 recite "a pH of between 1 and 5." pH 5 was not originally disclosed. This lacks adequate descriptive support.

(4) Claim 18 recites "about 3 to about 32 gallons per acre." There is insufficient descriptive support for ethephon + phosphoric acid, let alone for the other acids. Specification at page 6, lines 5-6 discloses 3 to 30 gallons per acre for ethephon and

phosphoric acid. Note, this does not convey 3 to 32 gallons per acre or about 3 to about 32 gallons per acre for phosphoric acid, let alone the other acids.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 10, 12-16 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The above noted claims recite or read on a mixture of 1-40% acid + 10-20% phosphonic compound(s), wherein "said mixture is formulated as a liquid for direct application to a cotton plant" (emphasis added). The emphasized part renders the claims indefinite. It is not clear what is being claimed, the 1-40% acid + 10-20% phosphonic compound(s) or a diluted formulation (which would then not satisfy the recited percentage requirements). Applicant's arguments indicate that the undiluted composition is being claimed (8/4/2008 response, page 8):

Applicant's claim 1 as amended is directed to a composition consisting essentially of 1 to 40% acid and 10 to 20% phosphonic compounds. Though CN 1252940 mentions a range from

However, applicant also argues that the invention of claim 1 provides greater efficacy and efficiency than phosphonic compound alone (8/4/2008 response, paragraph bridging pages 12 and 13):

Applicant's claim 1 as amended is directed to a formulation of one or more phosphonic compounds formulated with hydrochloric acid, nitric acid, phosphoric acid, phosphorus acid, polyphosphoric acid, or perchloric acid having greater efficacy and efficiency than the phosphonic compound alone. See Applicant's specification, Table 1, showing greater efficacy than would be anticipated for the combination of ethephon and muriatic acid. At least because

Applicant's own argument shows why the claims are indefinite and unclear, because here applicant is pointing to Table 1, which shows data with a highly diluted form of the composition (how much diluted is unclear from Table 1 and the rest of the specification). Thus, it is unclear what is being claimed – is it the 1-40% acid + 10-20% phosphonic compound(s) mixture or a diluted form thereof, which would then not meet such percentage requirements. Applicant's claim language is not clear enough to specify what exactly is being claimed, and applicant's arguments merely support the fact that two different interpretations of the claims are possible: the concentrated form or the diluted form, both of which could be mutually exclusive, i.e. it is possible that the concentration of one cannot be met by the concentration of the other.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-8, 10-11 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over CN 1252940 in view of The Agrochemicals Handbook, Farm Chemicals Handbook '98, Fritz et al. (US 3,879,188) and CABA abstract 80:49077, further in view of Ethephon publication (9/1998) and Imidacloprid publication (3/1995).

CN 1252940 discloses a plant growth regulating insecticide composition that contains 1-50% ethephon, 0.5-10% imidacloprid, dispersant, cosolvent, water, and 1-100% sulfuric or hydrochloric acid (see claim 1 for various specific growth regulating effects). Water-diluted solution for application is disclosed (translation page 10, below the table; see also the "preparation" of claim 2, which is distinguished from the "pesticide" of claim 1). Use on crops such as corn, fruit tree, cotton is disclosed (translation page 4, last paragraph; abstract). It is noted that the abstract of the Chinese document discloses cotton as a suitable plant for treatment. See original document abstract, which was provided in the previous Office action; for further evidence of this disclosure by the original Chinese document abstract, see the previous cited HCAPLUS abstract 2000:843249.

The Agrochemicals Handbook discloses ethephon as a compound that releases ethylene and interferes in the growth processes of plants (see "Mode of action"). Uses include regulation of phases of plant growth and development by application to various growth sites, wherein plants include coffee, cucumbers, tomatoes, citrus, peaches, etc. (see "Uses"). Ethephon is disclosed as stable in aqueous solutions having pH values

less than 3.5; otherwise, decomposition occurs with the separation of ethylene (see "Stability"). Pages A179-A180/Oct 83.

The Farm Chemicals Handbook '98 discloses ethephon to be a widely used plant growth regulator (ethylene generator). Uses on crops such as cotton, apples, and many others are disclosed. Stability under pH 3 is taught. See page 164.

Fritz et al. disclose the various plant growth regulating properties of ethephon and other phosphonic compounds (see claims 1, 18, 52-62; see also the structural formulas in columns 1-2). Wide variety of plant growth regulating response is obtained with ethephon, including increase in yield of cotton (column 4, lines 37-44; Example 32 on columns 27-28), abscission/defoliation of cotton (column 5, line 43; Example 34 on column 28), inhibition of terminal growth (paragraph bridging columns 4-5). See columns 4-77 for all the various plant growth regulating activities and examples, including increasing fruiting (column 4, lines 7, 30-32, 36-43). Addition of an acid for stability is taught, "to ensure that the pH is not greater than five" (sentence bridging columns 9-10). Selection of acid can be "any material which will impart the desired pH value" (column 10, lines 3-4). 1/2 to 4 pounds per acre in aqueous solution is preferred and total volume of application can vary from 1 to 100 gallons per acre (column 10, lines 17-21). Example 32 shows 453 g of ethephon/acre to 1813 g of ethephon/acre, and Example 34 shows cotton abscission/defoliation with 0.5%, 1%, 2% and 4% ethephon (columns 27-28).

CABA abstract 80:49077 discloses foliar spray of 1000 ppm (0.1%) ethephon for boll opening and increasing the yield of cotton.

The ethephon publication is cited to further establish that ethephon is a well known plant growth regulating agent with multiple plant growth regulating properties in multiple plants, including cotton; and the application rate varies from 0.08 to 2 pounds (36 g to 907 g) of active ingredient per acre depending upon the use site and desired effects (page 1).

The imidacloprid publication is cited to establish that imidacloprid is known to be commercially used for cotton, and the maximum amount of imidacloprid per season ranges from 0.31 pounds/acre (141 g/acre) for potatoes and 0.5 pounds/acre (227 g/acre) for apples (see page 1).

Even though the primary reference CN 1252940 does not explicitly disclose the various features of the instant claims, one having ordinary skill in the art would nonetheless have found such features and the claimed invention as a whole obvious for the reasons set forth below.

Even though CN 1252940 discloses 1-50% ethephon mixed in water with 1-100% sulfuric or hydrochloric acid, there is no specific example of 10-20% ethephon mixed with 1-40% acid, as claimed herein. Discussion of this issue will require two distinct explanations. First, the CN document clearly provides a teaching that includes such percentages. Second, one of ordinary skill in the art would have recognized that

the actual use formulations are diluted forms of both the composition by CN 1252940 and the composition by applicant.

The fact that CN 1252940 discloses and suggests the now-claimed 10-20% ethephon mixed with 1-40% acid is without question. 1-50% ethephon encompasses the claimed 10-20%, and 1-100% sulfuric or hydrochloric acid encompasses the claimed 1-40% acid. One having ordinary skill in the art would have been able to formulate such a composition from the motivation to control pests while regulating plant growth, e.g. regulating cotton growth, with ethephon, as taught by CN 1252940.

The ordinary skilled artisan would have also recognized that the concentrations of ethephon (and imidacloprid) in the composition of CN 1252940 is extremely high. For that matter, the ordinary skilled artisan would have further recognized that the concentration of ethephon in applicant's invention is also very high. Thus, the ordinary skilled artisan would have recognized the prior art and the claimed composition to be concentrates.

To put 10-20% ethephon (applicant) and 1-50% ethephon (CN 1252940) in context, it must be noted that CABA abstract 80:49077 discloses foliar spray of 1000 ppm (0.1%) ethephon for boll opening and increasing the yield of cotton and Fritz et al. disclose 0.5%, 1%, 2% and 4% ethephon for cotton. Clearly, both applicant and CN 1252940 are claiming and disclosing a concentrate from which a more diluted formulations are made in order to apply to the plant. Claim 2 of CN 1252940 is further

evidence of this ("A preparation of the [] pesticide [] described in Claim 1"). Applicant's specification disclosure at page 6, lines 4-6 is in complete agreement. There, applicant discloses mixing the composition with water to apply at a rate of up to 30 gallons/acre. If it were the case that 30 gallons/acre of a 10-20% ethephon composition were applied to plants, that would mean about 11 to 23 kilogram/acre would be applied to plants. This would be far too much ethephon to the plant per acre, based on known use amounts per acre (see e.g. ethephon publication), so one having ordinary skill in the art would have understood both the compositions by applicant and CN 1252940 are concentrates, wherein diluted formulations are made therefrom and applied thereafter. Similar conclusion is inescapable after comparing the typical imidacloprid amount that is applied per acre and noting the high concentration of imidacloprid in the composition disclosed by CN 1252940.

CN 1252940 does not explicitly disclose increasing the various claimed efficiency and efficacy of ethephon or its salts. However, the lower pH obtained with the use of the acid in CN 1252940 would at least have provided more of the active compound (due to higher stability) to provide increased efficiency.

CN 1252940 does not explicitly disclose increasing cotton defoliation efficiency of ethephon. However, it is known from Fritz et al. that ethephon has cotton defoliation activity. Hence, the lower pH obtained with the use of the acid in CN 1252940 would at

least have provided more of the active compound (due to higher stability) to provide increased efficiency and efficacy due to less degradation prior to use.

CN 1252940 does not explicitly disclose increasing cotton boll opening efficiency. However, it is known from Fritz et al. that cotton yield is increased and fruiting of plants is increased with ethephon application. Since a boll is technically a fruit since it contains seeds, such teachings (increase in both yield and fruiting) would have fairly suggested cotton boll opening. Additionally, CABA abstract 80:49077 specifically teaches cotton boll opening with ethephon application. Further, and as stated above, the lower pH obtained with the use of the acid in CN 1252940 would at least have provided more of the active compound (due to higher stability) to provide increased efficiency.

CN 1252940 does not expressly disclose the combination of ethephon and an acid such as hydrochloric acid at a pH between 1 and 5 or between 2 and 4. However, it is well known enough to be disclosed in industry handbooks that ethephon decomposes at a pH of about 3.5 and Fritz et al. disclose the desirability of keeping the pH of ethephon and other phosphonic plant growth regulating compounds below pH 5. The ordinary skilled artisan would thus have been motivated to formulate ethephon with an acid in order to keep the pH at the highly acidic range of below 4. In doing so, one having ordinary skill in the art would have exercised routine experimentation or

optimization to arrive at the claimed range since having a composition that is too extreme in acidity (e.g. below pH 1) would be expected to cause phytotoxicity problems.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited references.

In this regard, applicant's specification data on page 6 has been given consideration. The data has been deemed insufficient. It must be noted that although a concentrate composition is being claimed by applicant, applicant's specification data is directed to a diluted composition (how much dilution is unclear). So applicant does not actually have any objective evidence directed to the composition that is being claimed herein.

Further, it cannot be determined what the original concentrate composition was and what the diluted/tested composition was. Thus, it cannot be determined whether the specification data is directed the currently claimed subject matter. The only information provided in the specification for Table 1 is the fact that 16 fluid ounces of ethephon and 4% v/v "muratic [sic]" per acre were applied to the foliage of the target plant. One of ordinary skill in the art would be able to determine the ingredient concentrations of neither the original concentrate composition nor the diluted composition. 16 fluid ounces of ethephon does not inform the ordinary skilled artisan

what was the original concentration and what was the diluted concentration: all that is knowable is that somehow 16 ounces of ethephon was applied to an acre of foliage. 4% v/v hydrochloric acid similarly does not inform the ordinary skilled artisan what was the original concentrate and what was the diluted concentration. Therefore, it cannot be determined based on the applicant's disclosure whether 1-40% acid + 10-20% ethephon/salt was used, as claimed herein. Consequently, applicant's data fails to provide any evidence of nonobviousness.

Additionally, it would have been expected that a 4% muriatic acid-containing ethephon composition would be more stable than a composition that did not contain the muriatic acid since ethephon decomposes at pH above 3.5. Less decomposed ethephon would contain more active ingredient to provide the activity for which ethephon is known; and therefore, applicant's data cannot be given probative weight. The data does not rebut the expectation that an acid-added ethephon would be more stable, less decomposed, and thus more active and efficient.

Applicant's specification evidence is thereby deemed insufficient and the claims must be rejected.

Applicant's arguments of 8/4/2008, to the extent that they are relevant to this new ground of rejection, have been given due consideration but they were found unpersuasive.

Applicant argues that the acid in CN 1252940 is used for the purpose of dissolving imidacloprid, "implicitly teaching away from Applicant's claimed liquid mixture of phosphonic acid compounds and an acid." The Examiner maintains that the use of such acid in CN 1252940 would have been recognized by the ordinary skilled artisan as having the added benefit of providing additional stability, i.e. less degradation, of ethephon. Less degradation of ethephon would improve efficiency and efficacy.

Applicant continues to argue that "it is not well known that phosphonic compounds can be reliably formulated into an aqueous formulation with an acid for direct application to a cotton plant. This line of argument is without merit. Claims 1-2 of CN 1252940 expressly teaches such a combination in water. Full discussion of applicant's line of argument regarding US 2007/0037707 is addressed below in the next ground of rejection, and the discussion there is incorporated herein to address the same argument here.

Applicant further criticizes each of the cited references individually without taking into account what the prior art taken as a whole teaches. The prior art taken as a whole clearly teaches the combination of ethephon and hydrochloric acid at amounts that are readable on the instant claims. One having ordinary skill in the art would have been well aware of the benefit of an acid in ethephon because ethephon degrades at higher pHs.

For these reasons, this ground of rejection must be applied.

Claims 1-2, 4-8, 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fritz et al. (US 3,879,188) in view of CABA abstract 80:49077, The Agrochemicals Handbook, The Farm Chemicals Handbook '98, CN 1252940 and the ethephon publication.

Fritz et al. disclose the various plant growth regulating properties of ethephon and other phosphonic compounds (see claims 1, 18, 52-62; see also the structural formulas in columns 1-2). Wide variety of plant growth regulating response is obtained with ethephon, including increase in yield of cotton (column 4, lines 37-44; Example 32 on columns 27-28), abscission/defoliation of cotton (column 5, line 43; Example 34 on column 28), inhibition of terminal growth (paragraph bridging columns 4-5). See columns 4-77 for all the various plant growth regulating activities and examples, including increasing fruiting (column 4, lines 7, 30-32, 36-43). Addition of an acid for stability is taught, "to ensure that the pH is not greater than five" (sentence bridging columns 9-10). Selection of acid can be "any material which will impart the desired pH value" (column 10, lines 3-4). 1/2 to 4 pounds per acre in aqueous solution is preferred and total volume of application can vary from 1 to 100 gallons per acre (column 10, lines 17-21). Example 32 shows 453 g of ethephon/acre to 1813 g of ethephon/acre, and Example 34 shows cotton abscission/defoliation with 0.5%, 1%, 2% and 4% ethephon (columns 27-28). Use of solvents or cosolvents is disclosed (column 8, lines 11-15).

CABA abstract 80:49077 discloses foliar spray of ethephon for boll opening and increasing the yield of cotton.

The Agrochemicals Handbook discloses ethephon as a compound that releases ethylene and interferes in the growth processes of plants (see "Mode of action"). Uses include regulation of phases of plant growth and development by application to various growth sites, wherein plants include coffee, cucumbers, tomatoes, citrus, peaches, etc. (see "Uses"). Ethephon is disclosed as stable in aqueous solutions having pH values less than 3.5; otherwise, decomposition occurs with the separation of ethylene (see "Stability"). Pages A179-A180/Oct 83.

The Farm Chemicals Handbook '98 discloses ethephon to be a widely used plant growth regulator (ethylene generator). Uses on crops such as cotton, apples, and many others are disclosed. Stability under pH 3 is taught. See page 164.

CN 1252940 discloses a plant growth regulating insecticide composition that contains 1-50% ethephon, 0.5-10% imidacloprid, dispersant, cosolvent, water, and 1-100% sulfuric or hydrochloric acid (see claim 1 for various specific growth regulating effects). Example 1 shows a composition that contains about 40 wt% ethephon + about 30 wt% sulfuric or hydrochloric acid. Water-diluted solution for application is disclosed (translation page 10, below the table). Use on crops such as corn, fruit tree, cotton is disclosed (translation page 4, last paragraph; abstract).

The ethephon publication is cited to further establish that ethephon is a well known plant growth regulating agent with multiple plant growth regulating properties in multiple plants, including cotton; and the application rate varies from 0.08 to 2 pounds (36 g to 907 g) of active ingredient per acre depending upon the use site and desired effects (page 1).

The difference between the claimed invention and Fritz et al. is that Fritz et al. do not expressly disclose the combination of ethephon or other phosphonic plant growth regulating compounds and an acid such as hydrochloric acid or phosphoric acid. However, it is well known enough to be disclosed in industry handbooks that ethephon decomposes at a pH of about 3.5 and is stable at pH 3 or less — indeed, applicant acknowledges the same on page 8 of the 10/19/2007 response. The ordinary skilled artisan would thus have been motivated to formulate ethephon with an acid in order to keep the pH at the highly acidic range of below 3.5 or 3. Selection of a specific acid such as hydrochloric acid or phosphoric acid would have been obvious because these are common acidifying agents (see also Fritz et al., column 10, lines 3-4).

Instant claims recite increasing the efficiency and efficacy of a phosphonic compound in various plant growth regulating effect. All those plant growth regulating effect are known for ethephon and its structurally related phosphonic compounds from the teachings of Fritz et al. and the cited secondary references. Because the addition of an acid such as those recited by the claims would have been expected to provide

stability and result in less decomposition, the mixture of ethephon or other phosphonic plant growth regulating compounds with said acid would have been expected to deliver increased efficiencies and efficacies, as claimed.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited references.

In this regard, applicant's specification data on page 6 has been given consideration. The data has been deemed insufficient.

First, it cannot be determined what the original concentrate composition was and what the diluted/tested composition was. Thus, it cannot be determined whether the specification data is directed the currently claimed subject matter. The only information provided in the specification for Table 1 is the fact that 16 fluid ounces of ethephon and 4% v/v "muratic [sic]" per acre were applied to the foliage of the target plant. One of ordinary skill in the art would be able to determine the ingredient concentrations of neither the original concentrate composition nor the diluted composition. 16 fluid ounces of ethephon does not inform the ordinary skilled artisan what was the original concentration and what was the diluted concentration: all that is knowable is that somehow 16 ounces of ethephon was applied to an acre of foliage. 4% v/v hydrochloric acid similarly does not inform the ordinary skilled artisan what was the original

concentrate and what was the diluted concentration. Therefore, it cannot be determined based on the applicant's disclosure whether 1-40% acid + 10-20% ethephon/salt was used, as claimed herein. Consequently, applicant's data fails to provide any objective evidence of nonobviousness.

Second, it would have been expected that a 4% muriatic acid-containing ethephon composition would be more stable than a composition that did not contain the muriatic acid since ethephon decomposes at pH above 3.5. Less decomposed ethephon would contain more active ingredient to provide the activity for which ethephon is known; and therefore, applicant's data cannot be given probative weight. The data does not rebut the expectation that an acid-added ethephon would be more stable, less decomposed, and thus more capable of delivering the active ingredient. Applicant's specification evidence is thereby deemed insufficient.

Applicant's arguments of 8/4/2008, to the extent that they are relevant to this new ground of rejection, have been given due consideration but they were found unpersuasive.

Applicant argues that "as phosphonic compounds are commonly prepared at a pH below 3.5, one would not have anticipated a greater efficacy and efficiency by merely formulating phosphonic compounds with the [claim-recite acids]." However, applicant has failed to establish nonobvious objective evidence with respect to his currently pending claims because, inter alia, applicant did not establish that the pH of

the tested ethephon composition without the acid was below 3.5. Further, as fully discussed above, applicant has failed to establish objective evidence of nonobviousness for the currently claimed invention. Therefore, applicant's specification evidence does not rebut the prima facie case of obviousness set forth herein.

Applicant also cites US 2007/0037707 as evidence that one acidic adjuvant, LI-700 (contains propionic acid and surfactants), cannot be reliably co-formulated with ethephon. Another acidic additive, citric acid + phosphoric acid, is a tank mix additive for ethephon, as applicant acknowledges and US 2007/0037707 discloses.

The Examiner's position is that LI-700 may contain additives such as specific surfactants or other ingredients that may not be suitable for ethephon. Just because one acidic adjuvant that contains a mixture of many different ingredients does not co-formulate reliably with ethephon does not mean that other acids are taught away or not obvious. The failure to co-formulate reliably could be due to ingredients other than propionic acid.

Applicant asserts that US 2007/0037703 discloses unpredictability as to whether a particular adjuvant could be formulated with a phosphonic compound because, inter alia, citric + phosphoric acids are sold as a tank additive for ethephon. It cannot be understood how applicant ignores the plain teachings of CN 1252940, which explicitly teaches the pre-mix of acid + ethephon. Additionally, although US 2007/0037703 discloses citric + phosphoric acid as a tank mix additive, this post-filing document does

not go so far as to state that phosphoric acid or any other acid cannot be mixed with ethephon. Based on the prior art record established herein, including direct mixing of same or similar inorganic acids as taught by CN 1252940, applicant's arguments are not found persuasive. In light of the evidence taken as a whole, one having ordinary skill in the art would have found it obvious to mix the ingredients as claimed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to John Pak whose telephone number is **(571)272-0620**. The Examiner can normally be reached on Monday to Friday from 8 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's SPE, Johann Richter, can be reached on **(571)272-0646**.

The fax phone number for the organization where this application or proceeding is assigned is **(571)273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)